

IN THE CLAIMS:

Please amend independent Claims 1, 17, and 30 as follows.

1. (Currently Amended) A method of processing a metal layer on a substrate comprising:
  - a) disposing a substrate in a chamber having a chamber wall which includes a dielectric member which bears pressure loading, wherein an inductive power source is present exterior to said dielectric member of said chamber wall;
  - b) introducing a processing gas into said chamber;
  - c) passing processing power through at least a portion of said dielectric member and into said chamber to process a metal layer on said substrate in a plasma generated from said processing gas; and
  - d) uniformly heating a surface said portion of said dielectric member through which said processing power passes, to a temperature which uniformly decreases the deposition of power-blocking power-transfer-blocking materials while processing power is passing through said dielectric member, which power-transfer-blocking materials are byproducts of said metal layer processing, and where the amount of power-transfer blocking materials which deposit on a surface of said dielectric member are reduced relative to the amount of said power-blocking power-transfer-blocking materials which would accumulate without said heating , whereby a uniform transfer of power is achieved through said dielectric member.
2. (Cancelled)
3. (Previously Presented) The method of Claim 1 wherein said power-blocking materials include materials having a conductivity which increases as the thickness of the deposit decreases.
4. (Previously Presented) The method of Claim 2 wherein said power-blocking materials include materials having a conductivity which increases as the temperature of the dielectric member increases.

5. (Previously Presented) The method of Claim 1 wherein said power-blocking materials comprise electrically conductive elements.
6. (Previously Presented) The method of Claim 2 wherein said power-blocking materials comprise electrically conductive elements.
7. (Cancelled)
8. (Previously Presented) The method of Claim 2 wherein said temperature is greater than about 150°C.
9. (Previously Presented) The method of Claim 4 wherein said temperature is greater than about 225°C.
10. (Previously Presented) The method of Claim 1 wherein said power-blocking materials comprise an element selected from the group consisting of platinum, copper, aluminum, titanium, ruthenium, iridium and mixtures thereof.
11. (Previously Presented) The method of Claim 1 wherein said substrate including said metal layer comprises a semiconductor wafer.
12. (Previously Presented) The method of Claim 1 wherein said dielectric member includes a generally dome-shaped structure.
13. (Previously Presented) The method of Claim 12 wherein said processing power is selected from the group consisting of RF power, microwave power, and combinations thereof.
14. (Previously Presented) The method of Claim 1 wherein said chamber includes an inductively coupled RF power source which is used to generate a plasma of the processing gas.

15. (Previously Presented) The method of Claim 1 wherein said processing of said metal layer on said substrate is selected from the group consisting of etching said metal layer and depositing said metal layer.

16. (Previously Presented) The method of Claim 3 wherein said materials which block processing power transmission comprise platinum, and said processing of said metal layer comprises etching a platinum layer.

17. (Currently Amended) A method for decreasing the amount of deposition of semiconductor processing byproduct materials which affect the transmission of processing power through a pressure loaded chamber dielectric member, comprising:

a) providing a chamber having a chamber wall which includes a pressure loaded dielectric member, wherein said chamber contains at least one substrate and a plasma processing gas for processing said at least one substrate;

b) transmitting processing power through said pressure loaded dielectric member and into said processing gas to produce a plasma for processing said substrate; and

c) uniformly heating a surface of said dielectric member through which said power is transmitted to a temperature greater than about 150°C to uniformly decrease the amount of deposition on the said surface of said pressure loaded dielectric member of said semiconductor processing byproduct materials while processing power is passing through said dielectric member, where said amount of deposition of byproduct materials is decreased relative to the amount of said semiconductor processing byproduct materials which would accumulate without said heating, whereby a more uniform transfer of power is achieved through said dielectric member.

18. (Cancelled)

19. (Previously Presented) The method of Claim 17 wherein said processing power is RF power.

20. (Previously Presented) The method of Claim 17 wherein said processing power is microwave power.

21. (Previously Presented) The method of Claim 17 wherein said semiconductor processing byproduct materials comprise an element selected from the group consisting of platinum, copper, aluminum, titanium, ruthenium, iridium and mixtures thereof.
22. (Previously Presented) The method of Claim 21 wherein said deposit exhibits a conductivity which increases as the thickness of the deposit decreases when the temperature of the surface of said dielectric member increases.
23. (Previously Presented) The method of Claim 17 wherein said processing of said substrate comprises processing a metal layer on the substrate.
24. (Previously Presented) The method of Claim 23 wherein said substrate comprises a semiconductor wafer.
25. (Previously Presented) The method of Claim 17 wherein said pressure loaded dielectric member includes a generally dome-shaped structure.
26. (Previously Presented) The method of Claim 25 wherein said processing power is selected from the group consisting of RF power, microwave power, and combinations thereof.
27. (Previously Presented) The method of Claim 17 wherein said chamber includes an inductively coupled RF power source which is used to generate a plasma of said processing gas.
28. (Previously Presented) The method of Claim 23 wherein said processing of said metal layer is selected from the group consisting of etching said metal layer and depositing said metal layer.
29. (Previously Presented) The method of Claim 23 wherein said metal layer comprises platinum, and said processing of said metal layer comprises etching.

30. (Currently Amended) A method of etching a platinum layer disposed on a substrate comprising:
- a) disposing a substrate in a chamber having a chamber wall which includes a pressure loaded dielectric member and which contains a processing gas; and
  - b) uniformly heating an interior surface of said pressure loaded dielectric member to a temperature to uniformly decrease the amount of platinum by-products deposited on the said interior surface of said pressure loaded dielectric member during plasma etching of said platinum layer relative to the amount of said platinum by-products which would accumulate without said heating, whereby a uniform transfer of power is achieved through said dielectric member.
31. (Previously Presented) The method of Claim 30 wherein generation of said plasma comprises transmitting processing power through said dielectric member and into said plasma processing gas.
32. (Previously Presented) The method of Claim 30 wherein said temperature is greater than about 150°C.
33. (Previously Presented) The method of Claim 31 wherein said temperature is greater than about 150°C.
34. (Previously Presented) The method of Claim 30 wherein said platinum by-products are electrically conductive.
35. (Previously Presented) The method of Claim 33 wherein said platinum by-products are electrically conductive.
36. (Previously Presented) The method of Claim 30 wherein said platinum by-products are capable of forming a deposit having a conductivity which increases as the thickness of the deposit decreases.

37. (Previously Presented) The method of Claim 35 wherein said platinum by-products are capable of forming a deposit having a conductivity which increases as the thickness of the deposit decreases when the temperature of the interior surface of the dielectric member increases.

38. (Previously Presented) The method of Claim 30 wherein said processing gas used to generate said plasma is selected from the group consisting of argon, oxygen, chlorine and mixtures thereof.